



FY 03 ASCI Gap Assessment

Out-Briefing

CUBIT / VERDE

8/20 - 21





Participants and Roles

Sponsor:

Mike McGlaun

Code Team Contact:

Jason Shepherd

Assessment Team:

Joe Schofield, 9514

Harvey Ogden, 6536

Alex Treadway, 9514

Site Coordinator:

Lora Bonano, 9514

ASCI Assessments

Project Leader:

Molly Ellis, 9514





Assessment Schedule

8/20

8:30 – 9:00 In Briefing

9:00 – 10:00 Review of Objective Evidence

10:00 – 11:30 Project Management Interview

11:30 – 4:00 Assess Management Practices

8/21

8:30 – 9:30 Review of Objective Evidence

9:30 – 11:00 Interview Software Practices

11:00 – 12:30 Finalize Application Scores

1:30 – 3:30 Prepare Out Briefing (and call backs)

8/25



8:30 – 9:30 Out Brief Sponsor and Assessment Participants





Assessment Conduct

- Assessment based upon 47 SQE practices as defined in Practices document, Version 2, SAND2003-0962
- All statements are confidential
- Confidentiality applies to all participants
- Assessment results for the program belong to the Sponsor
- "To be at the fully implemented level (rated as a 3), a *documented* process for the practice needs to be in place, and the team needs to be following this documented process."
- All ratings are subject to ASCI Assessment Team review process





Scoring / Rating Values

What constitutes a process?

IEEE – *a sequence of steps performed for a given purpose.*

ASCI Applications SQE Practices – (*software*) process: A set of activities, methods, and practices for developing and maintaining a (*software*) product and its associated artifacts.

The ASCI Applications SQE Practices document describes expected ASCI code teams practices. It describes expected processes but *does not* constitute a process.

Statements that indicate that practices *will* or *shall* be performed are statements of intent or plans (or policy), but these are not processes.

A well-documented process contains inputs, outputs, roles and responsibilities, sequences and dependencies, reviews and approvals, and entry and exit criteria, as examples. A process should have many of, but necessarily all of these attributes. It may be textual or graphical but should not be merely imaginary or virtual. (jrs)



Examples for all (47) practices

Score	Example
0	C-team indicates they will not implement this practice.
1-	C-team indicates that they will implement this practice but have no objective evidence that planning or work has started.
1	C-team has objective evidence that planning activity has started for this practice: <ul style="list-style-type: none"> Meeting notes indicating that planning for this practice is being addressed (with indication of intent to complete the practice). Or, correspondence (email and other) that addresses the planning of the tasks required to implement this practice.
1+	C-Team has objective evidence that positive action has been taken on the planning for this task: <ul style="list-style-type: none"> Documentation of formal task assignment (with deadlines) for this practice. Or, formal schedules showing deliverables for this practice.
2-	C-Team has objective evidence that implementation has started. <ul style="list-style-type: none"> Preliminary drafts of either process or work products. Or, ancillary documentation (email, memos, ...) of productive discussions relating to the process and/or work products for this practice.
2	C-Team has objective evidence that significant progress has been made both on the practice outputs and the process. <ul style="list-style-type: none"> Work products (outputs) with significant content. And a draft practice process with significant content.
2+	C-Team has: <ul style="list-style-type: none"> A final version of the work products that fully address/implement the practice. And a final version of the process that covers this practice. And most of the C-Team is complying with the process.
3-	All aspects of 2+ and: <ul style="list-style-type: none"> C-Team has objective evidence that the practice results are repeatable and that the process has been communicated to the various stakeholders. The work products are being shared with appropriate stakeholders. And the process has been successfully repeated, or the process is judged by the assessors to likely be repeatable.
3	All aspects of 3- and: <ul style="list-style-type: none"> The practice is at a fully implemented level (maintenance stage). The practice could be evolving, via continuous improvement, but not dramatically changing as would be the case during a prototyping. The practice is fully integrated into the activities of the C-Team.

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Requirements Ratings & Comments

	AQMC	Code Team	A- Team	Notes
Practice / Ratings 3 - Fully Implemented 2 - Partially Implemented 1 - Plan to Implement				While the team does perform the practices associated with the Requirements Phase, a formal documented process does not exist for these practices.
1. Requirements Phase				
1a. Gather software requirements.	3	3	2-	Recently, user group meetings, questionnaires, and feedback sessions are used to gather requirements.
1b. Derive software requirements.	3	3	2-	Customer requirements are allocated across subteams which develop roadmaps for satisfying those requirements. This process is evolving.
1c. Document software requirements.	2	2	2-	Enhancements are tracked in Bugzilla.
1d. Assess feasibility, if applicable, and generate estimates for budget, resources, etc.	1	2	2-	People are budgeted by funding sources which relate to subprojects. The relationship to specific requirements is less clear and higher level (relationship among Bugzilla and spreadsheets and requirements).
1e. Establish acceptance criteria based on requirements.	1	1	2-	The team stated that customer requirements are incorporated into regression tests.
1f. Determine necessary links to other layers of requirements, code, and tests.	1	1	1-	No evidence presented to indicate that this practice is being performed.
1g. Ensure requirements traceability to other product artifacts throughout subsequent software phases.	1	1	1-	See 1.f.
1h. Review and approve requirements artifacts.	1	1	2-	Discussed in team meetings, customer involvement.





Design Ratings & Comments

	AQMC	Code Team	A- Team	Notes
Practice / Ratings 3 - Fully Implemented 2 - Partially Implemented 1 - Plan to Implement				The primary vehicle for determining design comes from project leader guidance; no overall design process. Project size drives level of formality for teams.
2. Design Phase				
2a. Derive the design.	2	2	2-	
2b. Communicate the design to the team.	3	3	2-	Monthly meetings, e-mail exchanges, some presentations.
2c. Document the design.	2	3	2-	
2d. Evaluate impact to requirements.	1	1	2-	Limited documented evidence.
2e. Plan for testing: initiate development of test plan.	1	1	2-	Practice performed in conjunction with (after) implementation.
2f. Review and approve design artifacts.	1	1	2-	“Major” reviews, approvals are verbal or by e-mail.





Implementation Ratings & Comments

	AQMC	Code Team	A- Team	Notes
Practice / Ratings 3 - Fully Implemented 2 - Partially Implemented 1 - Plan to Implement				Practices are being performed but a documented process for performing these practices was not evidenced.
3. Implementation Phase				
3a. Evaluate impact of implementation to design and requirements.	1	2	2-	Mostly via e-mail "threads."
3b. Translate design into code and other software artifacts.	3	3	2	Other artifacts are user manuals, design documents, style guides, help manuals. Some "drafty" process elements related to code evidenced. See 12b and 12c.
3c. Communicate issues with requirements / design team and developers.	3	3	2-	Several leadership, contractor, and planning meetings described during interview.
3d. Review and approve implementation artifacts.	1	1	2-	Still in the discussion stage, but some evidence of practice being performed.



Test Ratings & Comments

	AQMC	Code Team	A- Team	Notes
Practice / Ratings 3 - Fully Implemented 2 - Partially Implemented 1 - Plan to Implement				Policy with some process elements. Significant process content for some practices.
4. Test Phase				
4a. Finalize test plan.	2	2	2	Evidence that a test plan has been started.
4b. Execute test cases found in test plan.	2	3	2	Formalized test cases. Tracking via spreadsheet with a web-based database under development. This practice's process seemed like it was still "under construction."
4c. Review test case output using acceptance criteria defined in test plan.	3	3	3-	Sufficiently documented process in 4c, 4d, and 4e. These practices should serve as an example for other process areas.
4d. Document test case results.	1	3	3-	
4e. Retest updated software if acceptance criteria are not satisfied.	2	3	3-	
4f. Review and approve Test Subphase outputs.	1	2	2-	Final review by project leader.



Release Ratings & Comments

	AQMC	Code Team	A- Team	Notes
Practice / Ratings 3 - Fully Implemented 2 - Partially Implemented 1 - Plan to Implement				CUBIT uses an annual spring release cycle; previously reported under the ASCI IP. A documented process was not evidenced in this process area.
5. Release Phase				
5a. Receive and evaluate release request.	2	3	2-	Occasional requests for beta releases from customers.
5b. Plan and develop release.	2	3	3	Checklist-based process elements.
5c. Review and approve release.	3	3	2+	Approval implied with checklist dates, process documentation not as strong as 5b.
5d. Create and distribute release.	3	3	2	
5e. Support release, as agreed with customer.	1	2	2-	Support both a current and beta release. Support level is defined as part of the licensing agreement.





Project Management Ratings & Comments

	AQMC	Code Team	A- Team	Notes
Practice / Ratings 3 - Fully Implemented 2 - Partially Implemented 1 - Plan to Implement				
6. Project Planning				
6a. Submit IP addressing project tasks annually.	3	3	N/A	
7. Tracking & Oversight				
7a. Review milestone status quarterly.	3	3	N/A	
7b. Issue Baseline Change Proposals (BCPs), if needed.	3	3	N/A	
7c. Prepare performance reports on a quarterly basis.	3	3	N/A	
8. Risk Management				
8a. Incorporate risk identification and risk mitigation into project execution using the BCP.	2	3	N/A	





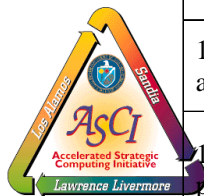
Support Elements Ratings & Comments

	AQMC	Code Team	A- Team	Notes
Practice / Ratings 3 - Fully Implemented 2 - Partially Implemented 1 - Plan to Implement				Enhancement requests tracked in Bugzilla. Assessment team treated Bugzilla as a “draft process.” Process documentation was not evidenced.
9. Requirements Management				
9a. Conduct requirements tracing.	1	2	2-	CVS commits link to Bugzilla IDs. Light evidence.
9b. Determine requirements ownership and status tracking.	1	2	2	Bug policy and Bugzilla, treated as “draft” processes and need to drive a more complete requirements management process.
10. Configuration Management				
10a. Conduct issue tracking of software product artifacts, including requirements.	3	3	2	2125 issues being tracked, about 15 percent of these are “open.” Use bug tracking and e-mail requests for enhancements.
10b. Perform version control of software product artifacts, including requirements.	3	3	2-	Third party software, test suite, regression tests, and user manuals cited as artifacts for version control.
10c. Perform release and distribution management.	3	3	2-	Good verbal evidence of process.
10d. Engage in ASCI records management.	2	1	2-	



Support Elements Ratings & Comments

	AQMC	Code Team	A- Team	Notes
Practice / Ratings 3 - Fully Implemented 2 - Partially Implemented 1 - Plan to Implement				TPS is used by this team; several products cited. A documented process was not evidenced though the practice is being performed.
11. Third Party Software				
11a. Accept third party software and libraries into the application code domain.	3	2	2-	Clear verbal evidence of process – need written.
11b. Install, integrate, and control the accepted third party software.	3	2	2-	Another example of a verbal process; documenting this and other practices would increase ratings.
12. Training				Training page is a good framework that needs to be further developed. Informal mentoring is the most often cited training vehicle. A small amount of documentation could quickly improve ratings. Good interaction with university contacts to maintain skill currency.
12a. Train appropriate project members in use of project management and project tracking and oversight processes.	2	2	2-	
12b. Train staff on activities necessary for producing software artifacts.	1	2	2	Newbie site has a number of good resources and many elements of a process within it. It's not as clear as to how longer term team members are kept current.
12c. Train staff on use of software tools.	2	2	2	Debugger, CVS, Bugzilla are some of the tools on which the team trains.
12d. Train staff on software processes and their implementation.	1	2	2	
12e. Train staff on software verification process and techniques.	1	2	2	One team member course certificate evidenced. Testing policy considered to be relevant even though not listed as evidence.





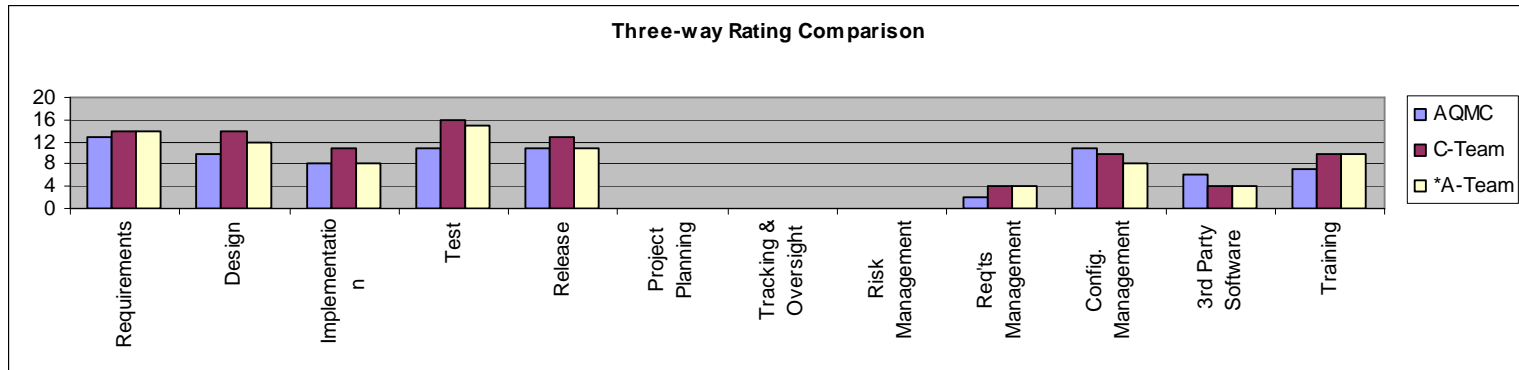
Summary Comparison – *You thought, we thought*

		C-Team Rating		
A-team Rating		1	2	3
	3			4c, 4d, 4e, 5b
	2	1e, 1h, 2d, 2e, 2f, 3d, 10d	1c, 1d, 2a, 3a, 4a, 4f, 5e, 9a, 9b, 11a, 11b, 12a, 12b, 12c, 12d, 12e	1a, 1b, 2b, 2c, 3b, 3c, 4b, 5a, 5c, 5d, 10a, 10b, 10c
	1	1f, 1g		





Summary Comparison – *AQMC (79) vs. C-team (96) vs. A-team (76.3) values*



*Includes the +’s and –’s





Summary

- Newbie concept is good for incoming team members.
- A documented process for most practices would increase the ratings significantly (at least 10 points).
- Quick responses to requests for evidence on the part of the CUBIT / VERDE team was appreciated.
- CUBIT / VERDE has an impressive number of internal and external customers.
- Large, diverse, and distributed team is working on issues that need to be addressed; moving in right direction.
- Questions & Discussion ...
- (if applicable) response by end of business day (today)

